Don Bluth Presents...

DRAGON'S LAIR

20th Anniversary Edition

Systems 99 LLC

ultracade technologies

© 2004 UltraCade Technologies and Systems 99 LLC
All Rights Reserved.

ultracade technologies

1716 Ringwood Avenue, San Jose, CA 95131 USA Telephone: 408-436-8885 Fax: 408-723-7225 www.ultracade.com

Systems 99 LLC

4560 Felter Road, Milpitas, CA 95035 Telephone: 415-793-3607 Fax: 866-213-4931 www.system99arcade.com

DRAGON'S LAIR™

20TH ANNIVERSARY EDITION

OPERATION MANUAL

VERSION 1.1

- **Read this booklet before use.**
- **Keep this booklet with machine at all times.**

Reproduction of this publication is forbidden without the prior written permission of Systems 99 LLC and UltraCade Technologies. This manual is only conditionally issued, and neither receipt nor possession thereof confers or transfers any right in, or license to use, the subject matter of the manual or any technical information contained thereof.

For permission requests write: UltraCade Technologies, 1716 Ringwood Avenue, San Jose, CA 95131 USA

For permission requests write: Systems 99 LLC, 4560 Felter Road, Milpitas, CA 95035

DRAGON'S LAIR ™

TABLE OF CONTENTS

1. LEGAL INFORMATION 4
1.1 Safety Notices 4
1.2 Warnings 4
1.3 Environmental Conditions 4
1.4 FCC Notices 5
1.5 License Information 5
1.5.1 Joshua Operating System 5
1.6 Warranty Information 5
1.6.1 Warranty Service 5
2. GAME SETUP 6
2.1 Game Features 6
2.2 Pre-Game Installation 6
2.3 Game Inspection 7
2.4 Game Installation 7
3. OPERATOR SETUP MENU 8
3.1 Operator Setup Menu 8
3.2 Accounting Menu 9
3.2.1 Game Statistics 9
3.2.2 Reset Statistics 9
3.3 Game Configuration Menu 10
3.4 Credits Configuration Menu 11
3.4.1 Credits Per Chute 1 And 2 11
3.4.2 Credit Cost For Each Play 11
3.4.3 Freeplay 11
3.5 Sound Configuration Menu 12
3.5.1 Sound Volume 12
3.5.2 Feedback Volume 12
3.5.3 Attract Mode Volume 12
4. TROUBLESHOOTING 13
4.1 OS Re-installation 13
4.2 Technical Support 13
5. SYSTEM DIAGRAMS 14
Figure 1 SUMICOM with USBlinx™ 14
Dragon's Lair Edge Connector 15
6. NOTES 16

1. LEGAL INFORMATION

1.1 SAFETY NOTICES

The following safety instructions apply to all game operators and service personnel. Specific warnings and cautions will be found throughout this manual where applicable. We recommend that you read this page before preparing your DRAGON'S LAIR for game play.

Use the following safety guidelines to help protect the system from potential damage and to ensure your personal safety.

To help avoid damage to the computer, be sure the voltage selection switch on the power supply is set to match the AC power available at the location:

- 115 volts / 60Hz in most of North and South America and some Far Eastern countries such as Japan, South Korea and Taiwan
- 230 volts / 50Hz in most of Europe, the Middle East and the Far East

To help prevent electric shock, plug the system power cables into properly grounded power sources. These cables are equipped with 3-prong plugs to help ensure proper grounding. Do not use adapter plugs or remove the grounding prong from a cable. If you must use an extension cable, us a 3 wire cable with properly grounded plugs.

To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner or uninterruptible power supply (UPS).

Be sure nothing rests on the system's cables and that the cables are not located where they can be stepped on or tripped over.

Do not spill food or liquid on your system.

Do not push any objects into the openings of the system. Doing so can cause fire or electric shock by shorting out interior components.

Keep your computer far away from radiator and heat sources.

Do not block cooling vents.

1.2 WARNINGS

Make sure all your connections are correct prior to switching on this product.
There are no user serviceable devices in this product. Opening the case of the Proton III system will void the warranty.
This device is static sensitive.
Power supply is 90~250VAC 7~3A
Monitor requirement is 4:3 Horizontal

1.3 ENVIRONMENTAL CONDITIONS

DRAGON'S LAIR is intended for indoor use only. Be sure to keep dry and maintain operating temperatures of 10-40 Celsius.

1.4 FCC NOTICES (UNITED STATES)

Electromagnetic Interference (EMI) is any signal or emission radiated in free space or conducted along power or signal leads, that endangers the functioning of radio navigation or other safety service or seriously degrades, obstructs, or repeatedly interrupts a licensed radio communications service. Radio communications services include but are not limited to AM/FM commercial broadcast, television, cellular services, radar, air-traffic control, pager, and Personal Communication Services (PCS). These licensed services, along with unintentional radiators such as digital devices, include computer systems, contribute to the electromagnetic environment.

Electromagnetic Compatibility (EMC) is the ability of items of electronic equipment to function properly together in the electronic environment. While this computer system has been designed and determined to be compliant with regulatory agency limits for EMI, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference with radio communications services, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the computer with respect to the receiver.
- Move the DRAGON'S LAIR away from the receiver
- Plug the DRAGON'S LAIR into a different outlet so that the computer and the receiver are on different branch circuits.

If necessary, consult a Regulatory EMC representative of UltraCade Technologies or an experienced radio/television technician for additional suggestions. You may find the FCC Interference Handbook, 1986, to be helpful. It is available from the U.S. Government Print Office, Washington, DC 20402, and Stock No. 004-000-00450-7 or on the word wide web at http:// www.fcc.gov/bureaus./compliance/www/tvibookt.html.

This device has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, and if not installed and used in accordance with the instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case you will be required to correct the interference at your own expense. Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

1.5 LICENSE INFORMATION

1.5.1 JOSHUA OPERATING SYSTEM

The JoshuaOS™ is used under license from Joshua Technology, Inc. Joshua Technology, Inc. retains all rights to the code, trademarks and copyrights. By accepting and operating an DRAGON'S LAIR system, the owner/operator of each DRAGON'S LAIR system agrees to abide by all copyrights and trademarks and not to attempt to decompile or modify the operating system in anyway. Questions regarding this operating system should be directed to technical support at www.ultracade.com or support@ultracade.com. JoshuaOS is copyrighted 2001-2004 by Joshua Technology, Inc.

1.6 WARRANTY INFORMATION

The DRAGON'S LAIR cabinet is guaranteed from manufacturing defects for 90 days.

1.6.1 WARRANTY SERVICE

If at some point you require warranty service, contact your distributor. If you purchased direct you can contact Systems 99 LLC at 1-415-793-3607, Fax 1-866-213-4931, service@www.system99arcade.com OR ULTRACADE Technical Support at 1-408-436-8885 or support@ultracade.com. If technical support staff determines that your DRAGON'S LAIR machine is defective, a Return Merchandise Authorization (RMA) number will be issued.

2.0 GAME SETUP

2.1 GAME FEATURES

Thank you for purchasing the DRAGON'S LAIR 20th Anniversary Edition. DRAGON'S LAIR is available in an upright, dedicated cabinet with a 19" CGA monitor or as a kit for installation in existing cabinets.

DRAGON'S LAIR 20th Anniversary Edition provides the following benefits to operators:

- Consistent earnings from proven, licensed games for all generations and both men and women
- Low purchase price
- Game Data stored on Hard Disk -no more seek time or reliability issues.
- UltraCade Technologies reliability
- Easy-to-use operator interface

2.2 PRE-GAME INSTALLATION

Remove the game from the shipping container. One set of keys is in the coin return slot. The other set of keys will be hanging on the inside of the coin door. Refer to Figure 2-1 for specific locations of each part of the machine. Connect the wall cord to a grounded (3-terminal) AC wall outlet.

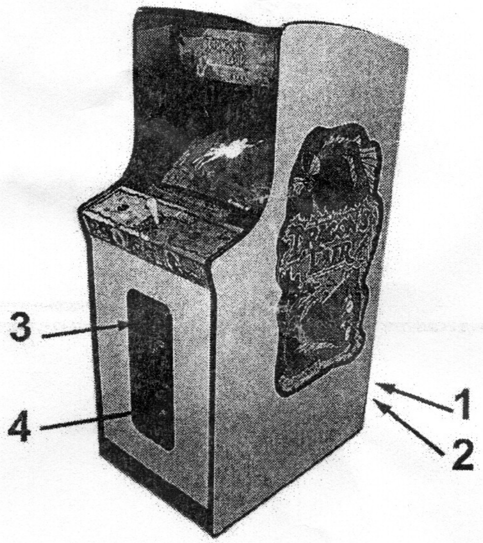


FIGURE 2-1 CABINET ASSEMBLIES

#	Description
1	On / Off Switch on bottom rear of cabinet
2	Control Panel
3	Coin Mech Door and Coin Return Slots
4	Coin Box Door

TABLE 2-1 CABINET ASSEMBLIES

The following precautions should be followed when installing the game:

- Avoid rough handling of the game; the picture tube is fragile.
- Install the game on a level surface.
- Avoid installing the game where it will receive excessive sunlight or heat, to protect the game from rising internal temperatures.
- Do not install in a damp or dusty location.
- For a short time after connecting the power to the game, the picture may be temporarily distorted.

The monitor's purity is affected by the Earth's magnetic field, causing a variation of color. By turning the game on for 10 or 15 seconds and then off for 20 or 30 minutes the automatic degaussing circuit applies a degaussing field around the edges of the monitor. Doing this several times will correct the problem.

Another way to correct the problem is to purchase a degaussing coil or bulk tape eraser at any electronics store. This will help to immediately demagnetize the video tube. Caution must be used with a degaussing coil so that the magnetic field of the degaussing coil is not allowed to become too intense at any one place on the picture tube, thereby causing a localized color distortion.

If you move the game to another location after degaussing the distortion may reappear. Refer to the video monitor manual for details.

2.3 GAME INSPECTION

DRAGON'S LAIR is shipped ready for operation, but a last visual check should be made to insure the game is in good condition. Please verify the following before turning the game on:

- Inspect the exterior of the game for any shipping damage, chips, dents, or broken parts.
- Open the rear service door and check for any interior damage.
- Check all major assemblies to assure they are mounted securely.
- Make sure there is no damage to the wiring and that all wires are properly connected.
- Open rear door panel and inspect Graphite system.
- Check for loose foreign objects, especially metal objects that may cause electrical problems.
- Open coin door and check test switch to make sure it is not damaged.

The game monitor is properly adjusted before shipping. If there are any adjustments necessary, refer to the video monitor manual. This manual contains all the manufacturers recommendations for adjusting the video monitor.

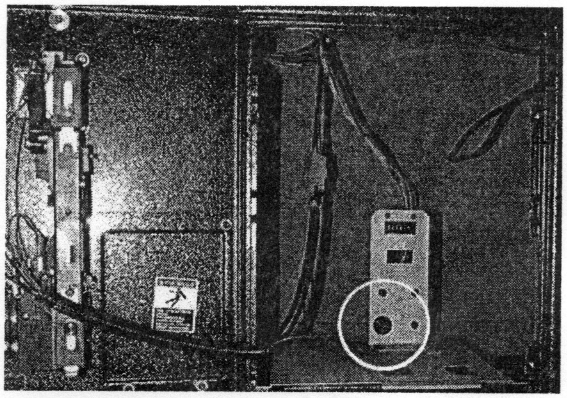
2.4 GAME INSTALLATION

Apply power to the game. When the game is fully started open the coin door and press the red test button to enter the Operator Setup Menu. This will allow you to configure your DRAGON'S LAIR for your specific needs. For more information see section 3. OPERATOR SETUP MENU.

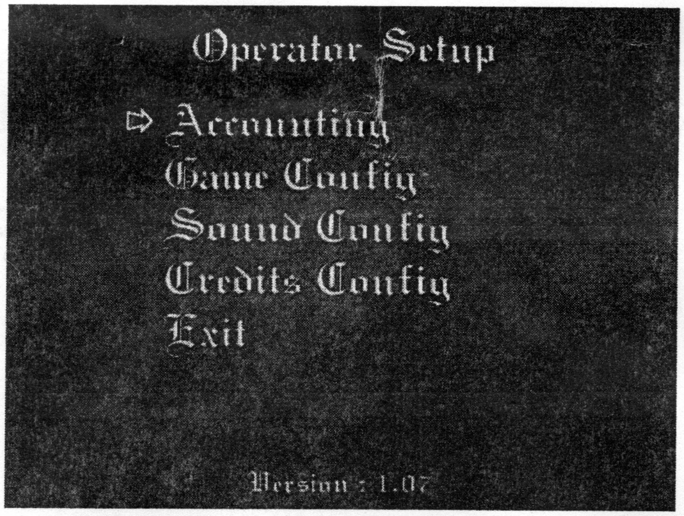
3.0 OPERATOR SETUP MENU

3.1 OPERATOR SETUP MENU

All DRAGON'S LAIR game audits, adjustments, and diagnostics are options of the Operator Setup Menu. Each option has its own submenu, listing several choices you may act upon as needed. Press the test button behind coin door in the cabinet to activate the Operator Setup Menu. Refer to Figure 2-1 and Figure 3-1 for locating the test button.



After you press the test button, you will see the operator setup menu, which will allow you to access the following: Accounting, Game Configuration, Sound Configuration, Credits Configuration, and Exit.

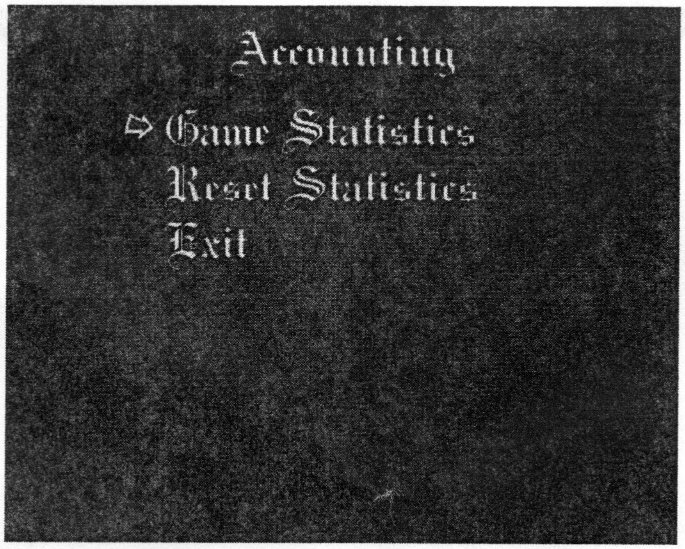


To choose a menu option, move the arrow or cursor so that the desired option is highlighted. This is done using the joystick. When the desired option is highlighted press the player one button one to select it and enter that submenu.

In this manual the term "highlight" will mean to position the arrow over the desired option. The term "select" will mean to press button one. The exit option on all menus will always go back to a previous menu.

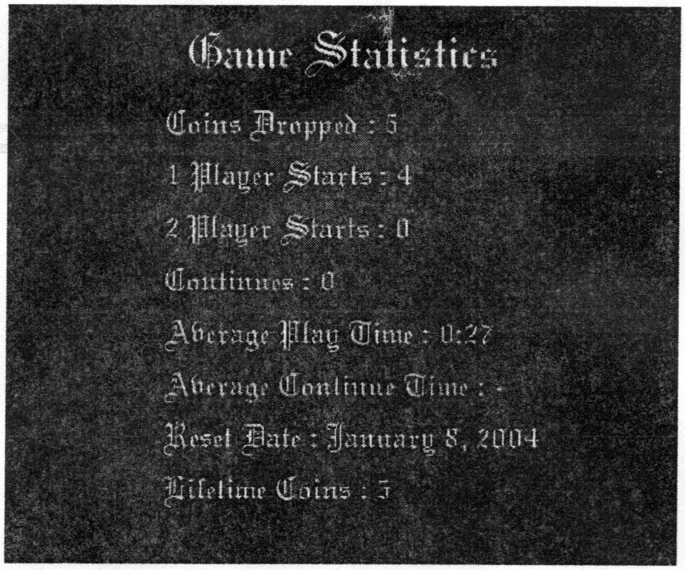
3.2 ACCOUNTING MENU

The Accounting Menu allows you to view and manipulate a report of current and lifetime coin totals for your DRAGON'S LAIR machine.



3.2.1 GAME STATISTICS

This menu shows all statistics available for the game since install or last reset. Individual coin drops for 1 Player, 2 Player, and Continues are listed as well as playtime statistics for initial and continue play. List of last reset and total lifetime coin drops are also available here.



Game Statistics

Coins Dropped : 5

1 Player Starts : 4

2 Player Starts : 0

Continues : 0

Average Play Time : 0:27

Average Continue Time : -

Reset Date : January 8, 2004

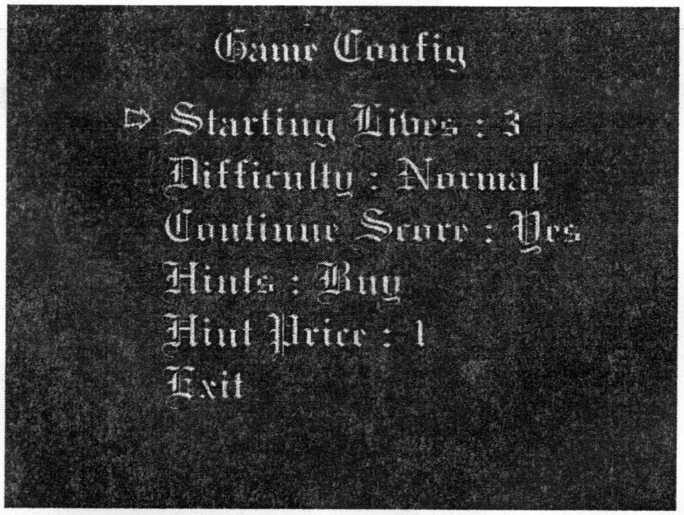
Lifetime Coins : 5

3.2.2 RESET STATISTICS

To reset current accounting data, coin bookkeeping table records, and current time reporting data; highlight Reset Statistics and select it. This will reset current game play counters and time reporting to zero (lifetime totals will remain). When this action has been successfully completed, "OK" will appear in the output window to the right.

3.3 GAME CONFIGURATION MENU

This menu allows you to setup your DRAGON’S LAIR machine Game Options to suit your location needs.



Game Config

⇨ Starting Lives : 3
Difficulty : Normal
Continue Score : Yes
Hints : Buy
Hint Price : 1
Exit

Starting Lives: allow you to set the default number of lives a player gets per coin drop.

Difficulty: sets game difficulty level.

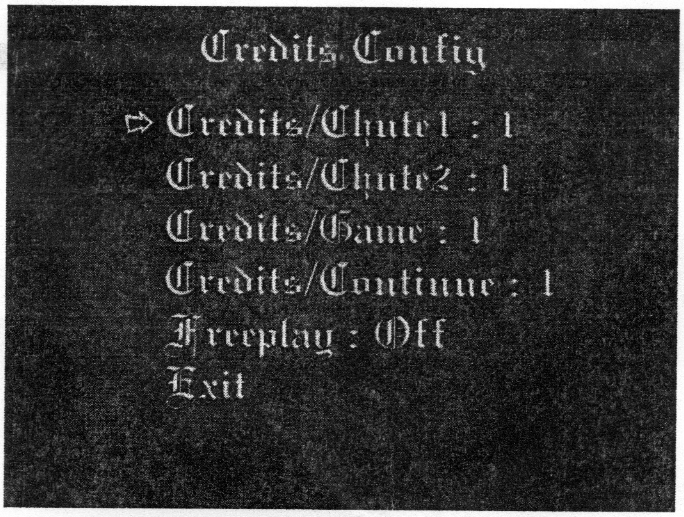
Continue Score: allows a player to continue accruing points after losing the default number of lives and continuing play by adding coins.

Hints: The hint system is a value add option that prompts the player to execute the correct move during game play. An icon will appear in the upper left corner of the screen to coach the player to do the appropriate action (arrows to indicate direction, a sword icon to initiate attack) at the right time. The Hint System allows players to more fully enjoy the game experience, while upping the initial coin drop for game play.

Hint Price: allows the operator to set the player cost for using the Hint System.

3.4 CREDITS / COIN MENU

The Credits / Coin Menu is used to set how much a play on your DRAGON'S LAIR machine costs, and to turn on or off free play.



Credits Config

⇨ Credits/Chute1 : 1
Credits/Chute2 : 1
Credits/Game : 1
Credits/Continue : 1
Freeplay : Off
Exit

3.4.1 CREDITS PER CHUTE 1 AND 2

This option allows the operator to set the number of credits given per coin drop on each coin mech. I.e. when set to 2, a player will receive two credits for one coin drop. Move the joystick left or right to set the values.

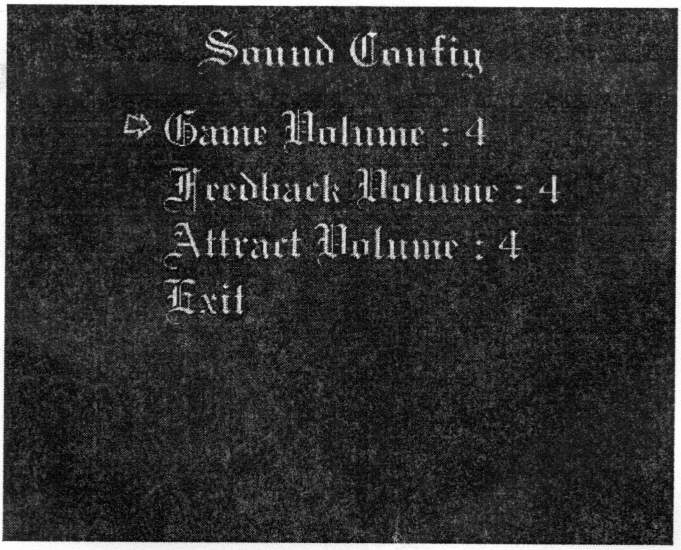
3.4.2 CREDIT COST FOR EACH PLAY

This option allows the operator to set the price to play a game. When set to 1, it will cost one credit for each play. When set to 2, it will cost 2 credits (fifty cents or two tokens) for each play. Move the joystick left or right to set the values.

3.4.3 FREEPLAY

Sets the game to free play. This makes all the games free to play.

3.5 SOUND CONFIGURATION MENU



Sound Config

⇨ Game Volume : 4
Feedback Volume : 4
Attract Volume : 4
Exit

3.5.1 GAME VOLUME

This menu option allows you to set the Game Volume level between one and ten. To adjust, highlight Game Volume on the Sound Configuration Menu (Fig. 3-7) and move the joystick to the left or right. Setting the value to "OFF" can turn off sound for the entire system.

3.5.2 FEEDBACK VOLUME

This menu option allows you to set the volume level for sounds played in response to player input, between one and ten. To adjust, highlight Feedback Volume on the Sound Configuration Menu (Fig. 3-7) and move the joystick to the left or right.

3.5.3 ATTRACT MODE VOLUME

This option allows the operator to turn the Attract Mode Volume between off and ten. To adjust, highlight Attract Volume on the Sound Configuration Menu (Fig. 3-7) and move the joystick to the left or right. Setting the value to "OFF" can turn off sound for the Attract Mode.

4. TROUBLESHOOTING

4.1 OS RE-INSTALLATION The DRAGON'S LAIR Operating System comes pre-in-stalled but if for any reason you need to reinstall your DRAGON'S LAIR game system, follow these steps:

- Power DRAGON'S LAIR on.
- Open rear door and insert the system CD supplied with your DRAGON'S LAIR.
- Cycle the power (Turn off then on again).
- On reboot you will see the installation menu.
- Highlight Format and Install and select it. **Note: Do not select Upgrade Only** as this option is only for operators who wish to upgrade a previous version of DRAGON'S LAIR.
- Enter the CD Key code delivered with the CD that is specific for the Hardware supplied with game. (If the key is lost – please call 1-408-436-8885 or 1-415 793-3607 for the key code for the specific game system. Please have available the system serial number listed on the bottom of the upgrade screen. (I.e. X-XXXX-XXX-XXX)
- When the install is complete open the control panel and remove the system CD.
- After the OS has been reinstalled no games will be loaded on the system.

4.2 TECHNICAL SUPPORT

Free telephone, email and online support are provided for DRAGON'S LAIR Systems during the warranty period. In addition to helping with trouble shooting and diagnosing defective parts, technical support is prepared to help you with questions about the operation of DRAGON'S LAIR.

When you contact technical support at UltraCade Technologies. Please provide the following background information to aid our technical support process:

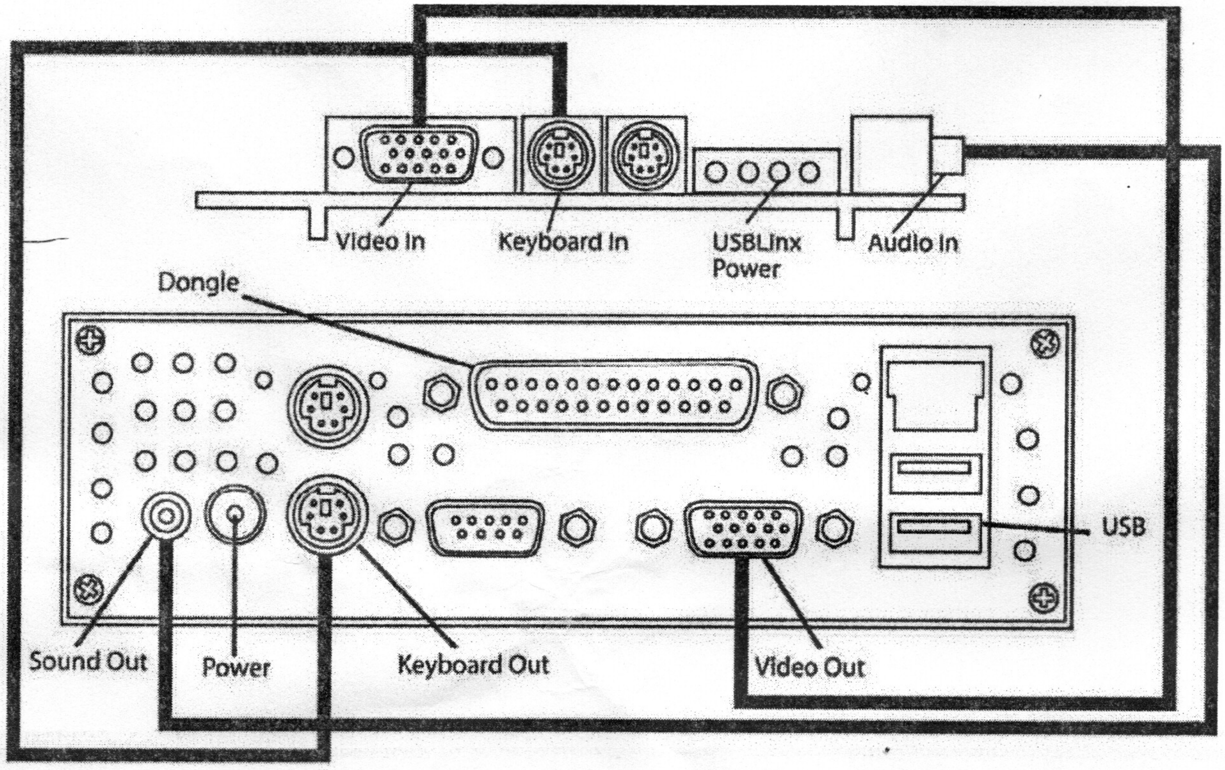
- Your mailing address and telephone number
- A summary of the question or a description of the problem with your DRAGON'S LAIR.

Technical Support is available from 9:00-5:00PST, Monday through Friday. Call 1-408-436-8885 to reach a technical support staff member. Email support is available if you email support@ultracade.com. Ultracade has online technical support resources including FAQS at http://www.ultracade.com.

Systems 99 LLC
4560 Felter Road
Milpitas, California 95035
Tel: 415-793-3607
Toll Free Fax: 866-213-4931
E-Mail: system99@direcway.com
Web Site: www.system99arcade.com

5. SYSTEM DIAGRAMS

FIGURE 5-1 - SUMICOM COMPUTER WITH USBLINX


Video In
Keyboard In
USBLinx Power
Audio In
Dongle
USB
Sound Out
Power
Keyboard Out
Video Out

ID	Description
Power 1	SUMICOM Power uses 12 volts at 5amps
Power 2	USB Linx Power uses 5volts / 2amps, and 12volts / 1amp
CD-ROM	CD-ROM is used to load UltraCade OS and Game Packs
CGA / EGA Dongle	EGA or CGA Dongle is used along with the Video pass through cable to select the monitor resolution for your cabinet
A	PS/2 Port used to connect player controls between USBlinx and SUMICOM
B	AUDIO Port used to connect sound between USBlinx and SUMICOM
C	Video Port 15-pin VGA signal used to connect between USBlinx and SUMICOM for CGA and EGA monitors only

Dragon's Lair Signal Connections

56 Pin Edge Connector To Jamma Harness

Component Side (TOP)	GND	GND	Test 2	P1#4	P1#3	P1#2	P1#1	P1RT	P1LF	P1DN	P1UP	P1START	P1COIN	TEST	V GND	BLUE	RED	RSP+	LSP+	CL01	CC1	KEY	+12V	-5V	VCC	VCC	GND	GND
Pin # Top	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	XX	6	5	4	3	2	1
Pin # Bottom	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	XX	6	5	4	3	2	1
Solder Side (Bottom)	GND	GND	Service 2	P2#4	P2#3	P2#2	P2#1	P2RT	PSLF	P2DN	P2UP	P2START	P2COIN	TILT	SERVICE 1	CSYNC	GREEN	RSP-	LSP-	CL02	CC2	KEY	+12V	-5V	VCC	VCC	GND	GND

GND = **System power Ground**
P1#1 = **Dragon's Lair Sword Button**
P1RT = **Player Move Right**
P!LF = **Player Move Left**
P1DN = **Player Move Down**
P1UP = **Player Move Up**
P1START = **Start 1 Player Game**
P2START = **Start 2 Player Game**
TEST = **Place System into Test and Setup Mode**
VGND = **Video output Ground**
BLUE = **Video output Blue Color**
RED = **Video output Red Color**
GREEN = **Video output Green Color**
CSYNC = **Video output Monitor Sync**
RSP+ = **Right Speaker +**
RSP- = **Right Speaker -**
LSP+ = **Left Speaker +**
LSP- = **Left Speaker -**
CC1 = **Coin Counter Output Open Collector**
+12V = **+12 Volt Power From Power Supply**
VCC = **+5 Volt Power From Power Supply**

NOTES: